

In re Patent Application of
BERTRAND ET AL.
Serial No. 10/813,564
Filed: MARCH 30, 2004

REMARKS

Applicants thank the Examiner for the careful and thorough examination of the present application. By this amendment, Claims 12, 23 and 33 have been amended to include features of respective dependent claims which have now been canceled. Claims 12, 13, 16-23, 26-33 and 36-42 remain pending in the application. Favorable reconsideration is respectfully requested.

I. The Invention

As shown in FIG. 3, for example, the disclosed invention is directed to a trigger whose hysteresis is not sensitive to the power supply potential VDD of the trigger and to temperature. The invention also provides a trigger whose hysteresis is high for low values of the power supply potential. This is provided by a comparator with two thresholds comprising a two-threshold latch of which one input and one output respectively form an input and an output of the comparator. The comparator at least includes a negative feedback loop acting on a first node for setting a first threshold of the comparator as a function of a first power supply potential applied to the first power supply terminal, and as a function of a first reference potential. The first threshold is an upper threshold, and the first reference potential is less than or equal to the first power supply potential, which is positive. Also, the first threshold is set so that a difference between the first power supply potential and the first reference potential is positive and increases as

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a function of the first power supply potential to limit an increase in the first threshold when the first power supply potential increases.

II. The Claims are Patentable

Claims 12-42 were rejected in view of Naura (U.S. 6,127,898) for the reasons set forth on pages 2-4 of the Office Action. As noted above, Claims 12, 23 and 33 have been amended, and Claims 14, 15, 24, 25, 34 and 35 have been canceled. Applicants contend that Claims 12, 13, 16-23, 26-33 and 36-42 clearly define over the cited reference, and in view of the following remarks, favorable reconsideration of the rejection under 35 U.S.C. §102 is requested.

The independent Claims now recite that the first reference potential is less than or equal to the first power supply potential, which is positive. Also, the first threshold is set so that a difference between the first power supply potential and the first reference potential is positive and increases as a function of the first power supply potential to limit an increase in the first threshold when the first power supply potential increases. It is these combinations of features which are not fairly taught or suggested in the cited reference and which patentably define over the cited reference.

The Examiner has relied on the Naura patent as allegedly disclosing each and every feature of the claimed invention. Firstly, Applicants note that the Naura patent is assigned to the same assignee of record in the present

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application, and the inventor, David Naura, is also a co-inventor in the present application. The Naura patent is directed to a ring oscillator using CMOS technology having three logic gates, including a threshold amplifier, where the transistors that set the voltage rise threshold and the voltage drop threshold in the amplifier are controlled by a bias control circuit so that the ratio of voltage rise threshold to the voltage supply diminishes and the ratio of the voltage drop threshold to the voltage supply increases, when the supply voltage falls. The Examiner refers specifically to the circuit illustrated in FIG. 5 of Naura as meeting the features of the claimed invention.

Firstly, Applicants maintain that the Examiner has misinterpreted the cited reference. Specifically, Applicants note that the Naura circuit has the effect of raising the ratio V_b/V_{dd} of the threshold at a drop in voltage (or voltage drop threshold) to the level V_{dd} of the supply voltage and of reducing the ratio V_d/V_{dd} of the threshold at a rise in voltage (or voltage rise threshold) to the level V_{dd} of the supply voltage when this level V_{dd} diminishes. In this way, the difference V_h-V_b gets reduced when the supply voltage falls. Indeed, there is no teaching of the first threshold being set so that a difference between the first power supply potential and the first reference potential is positive and increases as a function of the first power supply potential to limit an increase in the first threshold when the first power supply potential increases, as claimed.

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As the Examiner is aware, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim.

There is simply no teaching or suggestion in the cited reference to provide the combination of features as claimed. Accordingly, for at least the reasons given above, Applicants maintain that the cited reference does not disclose or fairly suggest the invention as set forth in Claims 12, 23 and 33. Thus, the rejection under 35 U.S.C. §102(b) should be withdrawn.

It is submitted that the independent claims are patentable over the prior art. In view of the patentability of the independent claims, it is submitted that their dependent claims, which recite yet further distinguishing features are also patentable over the cited references for at least the reasons set forth above. Accordingly, these dependent claims require no further discussion herein.

III. Conclusion

In view of the foregoing remarks, it is respectfully submitted that the present application is in condition for allowance. An early notice thereof is earnestly solicited. If, after reviewing this Response, there are any remaining informalities which need to be resolved before the application can be passed to issue, the Examiner is invited and

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respectfully requested to contact the undersigned by telephone
to resolve such informalities.

Respectfully submitted,


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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has
been forwarded via facsimile number 571-273-8300 to the
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-
1450 this 6 day of December, 2005.

